

**We claim:**

1. A terminal for displaying application program information in a windowing environment comprising:

5        processing means, not fully compatible with personal computer BIOS or disk operating systems and incapable of executing windowing applications locally, adapted to receive windowing information supplied by programs executing on a remotely located application server,

         display means for displaying the windowing information supplied by programs executing on the remotely located application server;

10       means for simultaneously maintaining more than one connection between the terminal and server.

2. The terminal of Claim 1 wherein the multiple connections means includes:

15       means for establishing more than one virtual machine on the terminal, each virtual machine running an open session.

3. The terminal of Claim 1 wherein the terminal having a foreground and background area and the multiple connections means includes:

20       means for stopping and redisplaying the writing of a screen when a session is moved to the background without saving the screen in memory.

4. The terminal of Claim 3 wherein the multiple connections means further includes:  
each virtual machine has a text buffer so when the virtual machine is in the background it has a virtual buffer that it can write to and it continues to run in the background;

25       each virtual machine sends a signal to a graphics application, the application sends a signal out to the server to command it to stop sending display when the application is switched to the background so that traffic relating to the graphics application between the terminal and server is stopped, the server is commanded to redisplay the screen when the application is switched back to the foreground.

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5. The terminal of Claim 3 the multiple connections means further includes:

each virtual machine stops sending and receiving data to and from the server when an application resides in the background session, each virtual machine commanding the server to refresh the data for the application when the application is switched to the foreground.

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6. A utility for displaying application program information in a windowing environment on a terminal having a processor, not fully compatible with personal computer BIOS or disk operating systems and incapable of executing windowing applications locally, and a remotely located application server executing programs which supply the windowing information, the terminal having a display configured for displaying the windowing information, the utility comprising:

means for simultaneously maintaining more than one connection between the terminal and server.

7. The utility of Claim 6 wherein the multiple connections means includes:

means for establishing more than one virtual machine on the terminal, each virtual machine running an open session.

8. The utility of Claim 6 wherein the terminal having a foreground and background area and the multiple connections means includes:

means for stopping and redisplaying the writing of a screen when a session is moved to the background without saving the screen in memory.

9. The utility of Claim 8 wherein the multiple connections means further includes:

each virtual machine has a text buffer so when the virtual machine is in the background it has a virtual buffer that it can write to and it continues to run in the background;

each virtual machine sends a signal to a graphics application, the application sends a signal out to the server to command it to stop sending display when the application is switched to the background so traffic relating to the graphics application between the terminal and server is

stopped, the server is commanded to redisplay the screen when the application is switched back to the foreground.

10. The utility of Claim 8 the multiple connections means further includes:

5 each virtual machine stops sending and receiving data to and from the server when an application resides in the background session, each virtual machine commanding the server to refresh the data for the application when the application is switched to the foreground.

10 11. A method for displaying application program information in a windowing environment comprising the steps of:

15 sending windowing information supplied by programs executing on a remotely located application server to a terminal not fully compatible with personal computer BIOS or disk operating systems and incapable of executing windowing applications locally;

displaying the windowing information supplied by programs executing on the remotely located application server;

simultaneously maintaining more than one connection between the terminal and server.

12. The method of Claim 11 wherein the multiple connecting step includes:

20 establishing more than one virtual machine on the terminal, each virtual machine running an open session.

13. The method of Claim 11 wherein the terminal having a foreground and background area and the multiple connecting step includes:

25 stopping and redisplaying the writing of a screen when a session is moved to the background without saving the screen in memory.

14. The method of Claim 11 wherein the multiple connecting step further includes:

30 providing each virtual machine a text buffer so when the virtual machine is in the background it has a virtual buffer that it can write to and it continues to run in the background; sending a signal from each virtual machine to a graphics application;

sending a signal from the application out to the server to command it to stop sending display when the application is switched to the background so traffic relating to the graphics application between the terminal and server is stopped;

commanding the server to redisplay the screen when the application is switched back to the foreground.

15. The method of Claim 11 wherein the multiple connecting step further includes: sending and receiving data from each virtual machine to and from the server when an application resides in the background session;

commanding the server from each virtual machine to refresh the data for the application when the application is switched to the foreground.

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